2002 TRIENNIAL REVIEW
DESCRIPTION OF ISSUES

Issue No. 1
Address the findings of the Nitrogen/TDS study.
The 1995 Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) identifies the buildup of salts, including total dissolved solids (TDS) and nitrates, in the waters of the Region as one of the Region's most significant water quality problems. Many of the TDS and nitrogen water quality objectives established in the 1975 Basin Plan are being exceeded. The Basin Plan includes a TDS and nitrogen management plan intended to address this problem. Wastewater reclamation activities tend to add to the mineralization problem and as a result, the TDS/Nitrogen Management Plan in the Basin Plan includes limited reclamation activities. During the 1995 revision of the Basin Plan, a number of wastewater and water supply agencies expressed concern that this TDS/Nitrogen Management Plan limits available wastewater reclamation opportunities in this area of increasing water demand but limited supply. These agencies, through the Santa Ana Watershed Project Authority (SAWPA), have been conducting a watershed-wide review to evaluate the TDS/Nitrogen Management Plan. The overall goal of the study is to consider whether it is appropriate to revise groundwater subbasin boundaries and respective TDS and nitrogen water quality objectives, and to develop a regulatory approach consistent with the Basin Plan and state and federal law and policy that will allow for increased reclamation opportunities in the watershed. Results of the N/TDS review may lead to adoption of a Reclamation Guidance Document (RGD) and the following amendments to the Basin Plan:

- Revision of water quality objectives for TDS and nitrogen for groundwater;
- Revision of groundwater subbasin boundaries;
- Revision of wasteload allocations for TDS and TIN;
- Update of TDS/nitrogen strategies in Chapter 5; and
- Possible deletion of water quality objectives/increments for individual mineral constituents (components of TDS);
- Adopt reclamation guidance document.

Estimated Resources:

Total Staff time:	3.5 PY (these resources to be provided by N/TDS study Task Force)
Contract:	(undetermined; to be provided, if necessary, by N/TDS study Task Force)
Duration:	4 years

Issue No. 2
Incorporate newly adopted or revised TMDL Basin Plan amendments (e.g., TMDLs for Newport Bay/San Diego Creek Watershed, Chino Basin, Big Bear Lake and Lake Elsinore).
Pursuant to Section 303(d) of the Clean Water Act (CWA), the Regional Board has identified a number of waterbodies in the Region as impaired due to various pollutants. For any waterbody listed as impaired, the CWA requires that a TMDL be established. The TMDL is the allowable amount of a pollutant that can be discharged from all sources, both point and nonpoint, and still ensure that water quality standards are achieved (water quality objectives are met and beneficial uses are protected).

TMDL development was initiated or completed for certain waterbodies/pollutants during the last triennial review cycle. Implementation of approved TMDLs is an ongoing task. During the next

3 year period, Board staff expects to develop TMDLs, and the associated implementation plans, for inclusion in the Basin Plan for the following waterbodies:

- Newport Bay and San Diego Creek for toxic substances, including selenium, diazinon and chlorpyrifos;
- Lake Elsinore for nutrients, sediment and toxics;
- Canyon Lake for nutrients and pathogens;
- Big Bear Lake, Summit Creek, Rathbone Creek and Grout Creek for nutrients;
- Big Bear Lake and Rathbone Creek for sediment;
- Knickerbocker Creek (Big Bear Lake tributary) for pathogens; and,
- Chino Creek, Cucamonga Creek/Mill Creek, Santa Ana River (Reach 3) for pathogens.

Estimated Resources:
Total Staff time: 32 PYs (to be supported by TMDL funds)
Contract $: $1,200,000
Duration: 4 years

Issue No. 3
Review Nutrient Objectives for San Diego Creek. Incorporate revised objectives in the Basin Plan.
In 1998, the Regional Board approved a nutrient total maximum daily load (TMDL) for the Newport Bay/San Diego Creek watershed to address eutrophic conditions (nutrient over-enrichment). The TMDL requires the Regional Board to review and revise as necessary the nutrient (total inorganic nitrogen) water quality objectives for San Diego Creek, Reaches 1 and 2, that are now specified in the Basin Plan. These objectives were intended to address the protection of underlying groundwater quality and not necessarily in-stream or in-bay eutrophication. Studies are underway to consider appropriate objectives.

Estimated Resources:
Staff time: 0.8 PY (TMDL funds will be used to conduct most of the work); 0.8 PY of Basin Planning Resources are expected to be required to support amendment of the Basin Plan to incorporate any new objectives
Contract $: $155,550
Duration: 4 years

Issue No. 4
Consider Water Code Section 13241 factors in relation to compliance with water quality objectives during wet weather (especially costs and need for housing).
During the consideration of reissuance of the areawide stormwater NPDES permit for those parts of Orange County within the Santa Ana Region, the co-permittees expressed concern about their ability to comply, and the costs of compliance, with established water quality objectives during wet weather. The co-permittees questioned whether the factors cited in Section 13241 of the California Water Code, especially costs and the need for housing in the area had been taken into account in establishing the objectives. The adopted permit states that Board staff would recommend that this matter be placed on the Triennial Review list. Staff believes that such a review would likely be a major undertaking. The Board's stakeholder community has expressed a strong interest in and tentative commitment to undertaking the studies necessary address this issue. Staff resources would be used to participate in stakeholder-led efforts to develop scopes of work, screen and select consultants, take part in study group meetings, etc.

Estimated Resources:
Staff time: 1.5 PY
Contract $: undetermined
Duration: 3 years

Issue No. 5
Designate new reaches of existing streams, to more accurately assign beneficial uses.
In order to more accurately assign existing wildlife habitat beneficial uses, a number of new reaches of currently listed waters should be designated, including the following:

- San Diego Creek – from Upper Newport Bay mean high tide to drop structure upstream of MacArthur Blvd. (Reach 1A); include EST
- Lytle Creek – from Miller Narrows downstream to Interstate 15 (Intermediate Reach); include WARM;
- Mill Creek – from Forest Falls Road downstream to Highway 38 (Intermediate Reach); include WARM;
- Santa Ana River – from Alder Creek downstream to Seven Oaks Dam (Reach 6); include WARM;
  Santa Ana River – from Alder Creek to Headwaters (Reach 7); remain COLD

A task force of stakeholders with interests along Lytle and Mill Creeks and upper reaches of the Santa Ana River have committed to support studies of this issue. Staff resources will be used to participate in task force activities.

Estimated Resources:
Staff time: 0.35 PY
Contract $: none
Duration: 3 years

Issue No. 6
Develop criteria for mitigating impacts to wetlands and other Waters of the State. Revise wetlands discussion to be consistent with current regulations.
Staff proposes to develop regional criteria for determining appropriate mitigation when wetlands and other Waters of the State are impacted by various construction activities, primarily those involving dredging and filling. Dredging and filling activities are subject to:

- Permits issued by the U.S. Army Corps of Engineers under Clean Water Act (CWA) Section 404; and,
- Water quality standards certifications issued by the SWRCB or Regional Board (under CWA Section 401).

In some cases, waste discharge requirements are adopted by the Board (pursuant to the California Water Code) for dredge and fill projects. These regulatory actions implement federal and state requirements for “no net loss of wetlands” as a result of land use practices, and state and federal policies encouraging the expansion of existing wetlands and creation of new ones.

Successful mitigation of the loss of wetlands and other Waters of the State depends on a number of factors, including consideration of the ecological functions and values of the impacted area, and the location of the proposed mitigation (within or outside of the impacted watershed), among others. The criteria that staff proposes to develop will enable both staff and the regulated community to more easily and consistently determine appropriate mitigation projects when wetlands and other Waters of the State are affected by construction or development.

Estimated Resources:
Staff time: 0.4 PY
Contract $: none
Duration: 3 years

Issue No. 7
Revise bacterial objectives for REC-1 and REC-2 uses for surface waters based on USEPA's national criteria (*E. coli* and enterococci). Add rationale for the 2.2 mpn/100 mL total coliform discharge limit for POTWs discharging to the Santa Ana River and its tributaries.

The 1995 Basin Plan includes a bacterial quality objective for REC-1 waters of a log mean of <200 fecal coliform organisms per 100 mL based on five or more samples per 30 day period. This objective is widely established both in California and the nation as a whole. It was based on studies conducted at bathing beaches in Ohio, Illinois and New York in the late 1940s and early 1950s by the United States Public Health Service. These early studies did not well address or define the relationship between water contaminated with treated sewage and health risks for swimmers. In 1986, the EPA published national criteria guidance *Ambient Water Quality Criteria for Bacteria – 1986* (EPA 440/5-84-002), recommending the use of *Escherichia coli* and enterococci as indicator bacteria. The epidemiological data upon which the criteria guidance is based indicate that *E. coli* and enterococci are better correlated with health effects related to water-contact recreation. USEPA's Action Plan for Beaches and Recreational Waters (EPA/600/R-98/079, March 1999) calls for all states to adopt bacterial standards that are consistent with current EPA guidance by 2003. The use of *E. coli* and enterococci as bacterial indicators is reflected in Title 17 of the California Code of Regulations, Sec. 7956 *et seq.*, regulations for public beaches and ocean water-contact sports areas. These regulations implement Assembly Bill 411.

In regulating the discharge of treated municipal wastewater to the Santa Ana River and other waters that are used for water contact recreation, the Regional Board has implemented the recommendations of the Department of Health Services. The Department's recommendations derive, in part, from the science underlying the Reclamation Criteria developed by the Department for various recycled water uses, including discharges to nonrestricted recreational impoundments. These Criteria are codified in Title 22 of the California Code of Regulations. Briefly, these criteria specify that discharges of recycled water to nonrestricted recreational impoundments (i.e., with REC-1 uses) must be adequately oxidized, coagulated, clarified, filtered and disinfected (tertiary treated or equivalent). The Criteria establish a performance standard of 2.2 mpn/100 mL total coliform to define adequate disinfection. The intent of this standard is to assure that essentially pathogen-free recycled water is produced, for public health protection. The Department also developed wastewater disinfection guidelines for discharges of wastewater to REC-1 surface waters ("Wastewater Disinfection for Public Health Protection"). The disinfection guidelines recommend the same treatment requirements for wastewater discharges to REC-1 waters as those stipulated in Title 22 for supply of recycled water to nonrestricted recreational impoundments, since the public health risks under both scenarios are analogous**.** Accordingly, to assure the protection of public health, the Board's waste discharge requirements for POTW discharges to REC-1 waters apply this 2.2 mpn/100 mL standard.

Comments have been received regarding this regulatory approach. The comments indicate that: (1) the Reclamation Criteria do not apply to discharges to surface waters and cannot, therefore, be used as the basis of setting effluent limitations in permits for POTW discharges to surface waters; and, (2) there is inconsistency between the 200 fecal coliform organism/100 mL

objective and the 2.2 mpn/100 mL standard included in the Board's permits, and this inconsistency must be addressed before the 2.2 mpn/100 mL standard can be lawfully applied. Findings in the Regional Board's waste discharge requirements have been augmented to provide a more detailed explanation of the basis for implementing this standard. However, explanatory language should also be included in the Basin Plan.

Estimated Resources:
Staff time: 1.6 PY
Contract $: none
Duration: 3 years

Issue No. 8
Add the following water bodies to the Basin Plan, and assign appropriate beneficial uses, including REC-1, REC-2, WARM and WILD:

- **Buck Gully, Los Trancos Canyon Creek, Muddy Canyon Creek, Pelican Hill Waterfall, Pelican Point Creek, Pelican Point Middle Creek, and Santa Ana Delhi Channel.**

These waters were not specifically included in the 1995 Basin Plan. Los Trancos, Muddy Canyon and Pelican Point Creeks discharge to Crystal Cove, which is an Area of Special Biological Significance (ASBS), and Santa Ana Delhi Channel discharges to Upper Newport Bay. Appropriate beneficial uses and water quality objectives need to be identified.

Estimated Resources:
Staff time: 0.9 PY
Contract $: undetermined
Duration: 3 years

Issue No. 9
Remove site specific objectives for copper, cadmium, and lead for middle Santa Ana River reaches and their tributaries.
Site-specific objectives (SSOs) for copper, cadmium, and lead for the Santa Ana River and certain tributaries were incorporated in the 1995 Basin Plan and submitted for review and approval by the USEPA. EPA reserved action on these SSOs in light of its promulgation of the California Toxics Rule (CTR), which incorporated new scientific information concerning the appropriate objectives for these metals that was not available at the time the SSOs were adopted. EPA reserved action to allow the Regional Board to consider whether it would be appropriate to delete the SSOs and to rely instead upon the CTR. Given the new scientific information, it appears appropriate to withdraw the SSOs in favor of the numeric water quality criteria in the CTR.

Estimated Resources:
Staff time: 0.2 PY
Contract $: none
Duration: 1 year

Issue No. 10
Establish water quality objectives for Mill/Cucamonga Creek at Prado Basin.
This is an issue remaining from the 1998 Triennial Review. Cucamonga Creek flows into Mill Creek, which is a major tributary to the Santa Ana River in the Prado area. Currently there are

no water quality objectives for Mill Creek. Appropriate objectives should be developed to assure appropriate regulation of waste discharges and to protect beneficial uses.

Estimated Resources:
Staff time: 0.4 PY
Contract $: undetermined
Duration: 2 years

Issue No. 11
Review ammonia objectives based on 1999 USEPA national criteria.
The 1995 Basin Plan incorporated new site-specific objectives for un-ionized ammonia (the toxic form of ammonia) for the Santa Ana River and certain tributaries. These objectives are implemented by limitations on ammonia in waste discharges to these waters. The requisite effluent ammonia limits are also specified in the Basin Plan. Finally, the 1995 Basin Plan includes revised, basin-wide un-ionized ammonia objectives. EPA reserved action regarding approval of these new objectives and requested that Board staff submit additional technical justification.

EPA published revised national criteria guidance for ammonia in the Federal Register on December 22, 1999. The revised criteria are based on new scientific information concerning un-ionized ammonia toxicity. Board staff has advised EPA that given this new science, it does not appear worthwhile to pursue EPA approval of the objectives in the Basin Plan. Staff advised EPA that we would recommend that review of these objectives (and associated implementation provisions) be included in the Triennial Review list. EPA is expected to promulgate criteria for states failing to adopt numerical objectives consistent with the new criteria by 2004.

Estimated Resources:
Staff time: 0.45 PY
Contract $: undetermined
Duration: 2 years

Issue No. 12
Revise numeric objective for residual chlorine for discharges to surface waters.
The Basin Plan currently specifies that the chlorine residual in wastewater discharged to inland surface waters shall not exceed 0.1 mg/L. During the 1994 revision of the Basin Plan, the California Department of Fish and Game commented that this objective is not sufficiently stringent to protect aquatic and wildlife habitat beneficial uses. Board staff initially proposed that the objective be revised to 0.05 mg/L; however, comments were received from Chino Basin MWD (now, Inland Empire Utilities Agency) and Metropolitan Water District that this revised objective might not be achievable with existing wastewater treatment technologies. It was suggested that compliance with a more stringent chlorine residual limit could necessitate complete reconfiguration of wastewater treatment plant treatment trains or application of overly expensive, innovative technologies. By contrast, other comments indicated the 0.05 mg/L objective might not be sufficiently protective of aquatic life. More recently, USEPA has commented that a chlorine objective for ambient surface waters, not simply wastewater discharges, should be included in the Basin Plan. EPA indicates that the residual chlorine objectives should be identified based on a consideration of the EPA's 1984 Ambient Water Quality Criteria – Chlorine (EPA 440/5-84-030 Jan. 1985).

One of the high priority issues identified by the Regional Board during the 1994 and 1998 triennial reviews was to evaluate the residual chlorine objective, but it has not been completed to date because of resource constraints.

Estimated Resources:
Staff time: 1.1 PY
Contract $: (undetermined)
Duration: 4 years

Issue No. 13
Substantive editorial changes
Substantive narrative revisions to the 1995 Basin Plan include the following:

- Add narrative on Alaska Rule. On April 27, 2000, USEPA published a final rule (65 FR 24641) regarding when state water quality standards become effective for CWA purposes. This rule, known as "EPA Review and Approval of State and Tribal Water Quality Standards," provides that state water quality standards, or amendments to such standards, submitted to EPA for approval after May 30, 2000 (effective date of the rule), must be approved by EPA before such standards or amendments may be implemented for CWA purposes. The Basin Plan should be updated to reflect this regulation.
- Add narrative on implementation procedures for turbidity. USEPA has recommended that the Basin Plan should explain how turbidity standards are to be implemented (e.g., how "natural turbidity" is to be determined and what measures are used to control turbidity when the standard is exceeded).
- Add narrative on implementation procedures for toxic substances objectives. The Toxic Substances objective in Chapter 4 of the 1984 Basin Plan was changed to three separate narrative objectives addressing: (1) bioaccumulation of toxic substances; (2) contaminant concentrations in drinking water sources; and (3) water column, sediment and biota toxic pollutant concentrations adversely affecting beneficial uses. USEPA has recommended that the first narrative objective under Toxic Substances should be amended to read: *Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to aquatic organisms, other wildlife, and human health*. EPA also recommended that the Basin Plan be revised to include a description of NPDES permit implementation procedures for toxicity related objectives.
- Revise Section 3 Beneficial Use Tables narrative to incorporate Tributary Rule. Current wording is "Specific waters which are not listed have the same beneficial uses as the streams, lakes or reservoirs to which they are tributary or the groundwater basins or subbasin to which they are tributary or overlie." This wording should be broadened to reflect wording in the "Tributary Rule": "(b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters."
- Revise Section 5 Prohibitions Applying to Inland Surface Waters (saline discharges). The Basin Plan does not explicitly prohibit the discharge of acids or caustics (whether neutralized or not), or excessively saline wastes to surface waters. These prohibitions should be added to the plan.
- Revise Section 5 Prohibitions Applying to Inland Surface Waters (sewage discharges). The Basin Plan now prohibits the discharge of untreated sewage to any "surface water streams." This prohibition should be broadened to include "any inland surface water."

Estimated Resources:
Staff time: 0.7 PY

Contract $: none
Duration: 3 years

Issue No. 14
Review/revise beneficial use designations for the following water bodies:

- Irvine Lake – add IND and COMM
- San Diego Creek (all reaches) – add RARE
- Lytle Creek (valley reach) – add RARE
- Cajon Creek (valley reach) – add RARE
- City Creek (valley reach) – list reach individually, assign beneficial uses, and designate beneficial uses "X" (existing); add RARE
- Peters Canyon Wash – list individually, assign beneficial uses, and designate beneficial uses "X"
- San Sevaine Creek – list individually, assign beneficial uses, and designate beneficial uses "X"
- Laguna Reservoir – review MUN exception
- Lambert Reservoir – review all beneficial uses including MUN exception
- Peters Canyon – review MUN exception
- Siphon Reservoir – review MUN exception
- Santa Ana River (Reach 4) – add RARE
- Shay Meadows – add RARE; change beneficial uses from "I" (intermittent) to "X"

(1) New (since 1998) information has become available indicating that a number of waters support recently listed rare, threatened and/or endangered species or their habitat; and, therefore, it is appropriate to add the RARE beneficial use to these waters.
(2) Additionally, a number of minor streams are collectively listed and assigned beneficial uses in the current Basin Plan. New information indicates the need to review these listings and, if appropriate, individually list and assign beneficial uses to some of these streams.
(3) USEPA reserved action on a previous Basin Plan amendment that excepted a number of water bodies for MUN beneficial use. These include several waters that are currently used exclusively for storage of agricultural irrigation water: Laguna Reservoir, Lambert Reservoir, Peters Canyon Reservoir, and Siphon Reservoir. These exceptions need to be reviewed.

Estimated Resources:
Staff time: 0.9 PY
Contract $: none
Duration: 4 years

Issue No. 15
Add discussion of Designated Maintenance Area ordinances as an avenue of compliance with Prohibitions Applying to Groundwaters, in Chapter 5.
Designated Maintenance Areas (DMAs) need to be recognized in the Basin Plan as a mechanism for exemption from certain waste discharge prohibitions. San Bernardino County staff, working in conjunction with Board staff, developed and implemented a DMA ordinance for the Mill Creek prohibition area that allows on-site disposal systems (OSDS) not conforming to adopted exemption criteria to continue to operate within this prohibition area. Key features of the DMA include bringing existing OSDS up to Plumbing Code requirements, and regular OSDS

inspections by qualified contractors. Board staff determined that compliance with this DMA satisfies the intent of the prohibition. The Basin Plan did not envision DMA compliance as a criterion for exemption, and the Plan should be amended accordingly.

Estimated Resources:
Staff time: 0.15 PY
Contract $: none
Duration: 2 years

Issue No. 16
Reevaluate temperature criteria to ensure full protection of aquatic life.
The current temperature standard in the Basin Plan protects against adverse effects of heated water discharges on beneficial uses by expressing limits on temperature increases. USEPA has suggested that the temperature objective may be overly general and may not be adequately protective of aquatic life, particularly native species. USEPA's present policy is to protect for the most sensitive species in the water body by season. Optimal temperature values are available for various species for growth and survival at all life stages and should be reviewed.

Estimated Resources:
Staff time: 0.25 PY
Contract $: undetermined
Duration: 1 year

Issue No. 17
Update dissolved oxygen objectives for WARM/COLD beneficial uses.
Comments from USEPA suggest that the Regional Board should consider optimal levels of dissolved oxygen for various life stages of salmonid fishes and other aquatic species. Criteria recommended by USEPA in 1986 include warm and cold water dissolved oxygen values for embryonic, larval, and other life stages (Ambient Water Quality Criteria for Dissolved Oxygen, EPA 440/5-86-003, April 1986). Values are available for salmonid waters and non-salmonid waters with criteria ranging from "no production impairment" to "limit to avoid acute mortality."

Estimated Resources:
Staff time: 0.25 PY
Contract $: undetermined
Duration: 1 year

Issue No. 18
Review silver water quality objective for groundwater.
The Basin Plan currently specifies a silver water quality objective of 0.05 mg/L for groundwater. The Maximum Contaminant Level (MCL) for silver has been revised to 0.1 mg/L. The Basin Plan should be updated to reflect the new MCL. This item was on the list of issues for the 1998 Triennial Review, but has yet to be addressed.

Estimated Resources:
Staff time: 0.25 PY
Contract $: none
Duration: 1 year

Issue No. 19
Rewrite Animal Confinement Facilities (Dairies) discussion in Chapter 5.
The Regional Board's program to address waste discharges from confined animal facilities has evolved significantly, and the Basin Plan should be revised to reflect the current direction of these ongoing activities.

Estimated Resources:
Staff time: 0.25 PY
Contract $: none
Duration: 1 year

Issue No. 20
Develop and adopt biological criteria for managing water quality
Development of biological criteria was identified in USEPA's *Water Quality Criteria and Standards Plan* (EPA 822-R-98-003, June 1998) as one of six priority objectives for the water quality standards program for this decade. USEPA indicates that the Regional Board should develop bioassessment and biocriteria consistent with USEPA's technical guidance.

Estimated Resources:
Staff time: 2.0 PY
Contract $: undetermined
Duration: 1 year

Issue No. 21
Santa Ana River, Reach 3 – add TOC water quality objective.
Total organic carbon (TOC) is a direct measure of the organic content in water. The California Department of Health Services (DHS) has published draft (4-23-01) Groundwater Recharge Reuse regulations for groundwater recharge with recycled municipal water. The proposed TOC limit is dependent on the percentage of contribution of recycled water to the groundwater in storage. These regulations are applicable to the Santa Ana River, which is comprised primarily of recycled water and is a significant source of recharge in Orange County. It is appropriate to incorporate a TOC objective for the Santa Ana River, Reach 3, in order to protect the Orange County groundwater recharge activities.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: 1 year

Issue No. 22
Update discussion of the implementation of the antidegradation policy in Chapter 2 to address nonpoint source (NPS) pollution.
The Basin Plan references State Board Resolution No. 68-16 as the State's antidegradation policy. USEPA has recommended that the discussion of implementation of the State's antidegradation policy in the Basin Plan should be expanded to clarify that the State has, in State Board Order No. 86-17 and in an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy. Further, the Basin Plan should consider and address how the policy is to be applied to NPS pollution.

Estimated Resources:
Staff time: 0.2 PY
Contract $: none
Duration: 1 year

Issue No. 23
Review Methylene Blue-Activated Substances (MBAS) water quality objective for surface waters.
MBAS is an indicator for presence of detergents in water. Positive results may indicate the presence of wastewater. The 1995 Basin Plan specifies a MBAS water quality objective of 0.05 mg/L. In 1992, the Department of Health Services updated the MBAS secondary drinking water standard to 0.5 mg/L. The Basin Plan should be updated to reflect the updated standard.

Estimated Resources:
Staff time: 0.05 PY
Contract $: none
Duration: 1 year

Issue No. 24
Santa Ana River, Reach 3 – Clarify the COD water quality objective.
The Basin Plan specifies water quality objectives for the Santa Ana River, Reach 3, in order to protect Orange County groundwater subbasins. In the 1983 Basin Plan, Reach 3 objectives are specified as filtered objectives; however, the "filtered" specification was inadvertently omitted for COD from the 1995 Basin Plan.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: 1 year

Issue No. 25
Update Chapter 5 Prohibitions Applying to Inland Surface Waters to include lakes.
Section B.1. on page 5-5 of the Basin Plan states "The discharge of untreated sewage to any surface water stream, natural or man-made, or to any drainage system intended to convey stormwater runoff to surface water streams, is prohibited." This statement should be revised to include lakes, reservoirs, and tributaries thereto.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: 1 year

Issue No. 26
Update Chapter 5 Disposal of Hazardous and Nonhazardous Waste to reflect loss of SWAT program.
The final section of Chapter 5 references the Solid Waste Assessment Test (SWAT) program, which was implemented in 1985. The purpose of the SWAT program was to determine whether

hazardous or toxic substances above regulatory thresholds, or any other constituents which may threaten water quality, were migrating from a solid waste disposal facility. As of 1995, funding for this program ceased and is not expected to be reinstated. The Basin Plan should be amended to reflect this change.

Estimated Resources:
Staff time: 0.05 PY
Contract $: none
Duration: 1 year

Issue No. 27
Consider need for clarification of Chapter 5 Minimum Lot Size Requirements and Exemption Criteria for New Developments (using onsite sewage disposal systems).
There are areas in the Region where residential development is occurring on small lots where sanitary sewers are not available. Because of economic factors, there continues to be a demand for this type of development. Studies have shown that high density developments relying on on-site sewage disposal systems (OSDS) impact water quality by increasing concentrations of nitrates in groundwater. As a result, in 1989, the Board adopted Resolution No. 89-157 and amended the Basin Plan to require one-half acre minimum lots for new developments using OSDS. The Regional Board also adopted and subsequently revised certain criteria for exemptions from this lot size requirement. It is not clear that county and municipal planning and building authorities have applied the minimum lot size requirements and exemption criteria consistently and correctly, in part perhaps because of a lack of clarity in the requirements themselves. Board staff is addressing this matter with the involved agencies and may recommend some clarifications of the requirements.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: 1 year

Issue No. 28
Update the SLIC Program discussion in the Basin Plan.
The Basin Plan currently contains a description of the SLIC program, the Regional Board's program to address groundwater contamination from volatile organic compounds (VOCs). The information/data in the description need to be updated to reflect current conditions.

Estimated Resources:
Staff time: 0.05 PY
Contract $: none
Duration: 1 year

Issue No. 29
Update nutrient objectives for Basin.
Currently, the Basin Plan has a general narrative statement concerning nutrient objectives for enclosed bays, estuaries, and inland surface waters which reads, "Waste discharges shall not contribute to excessive algal growth in bays, estuaries, and inland surface waters." The Basin Plan has surface water quality objectives for un-ionized ammonia, for protection of COLD and WARM beneficial uses, and for total inorganic nitrogen, for protection of the MUN beneficial use.

At this time, the Basin Plan does not have region-wide objectives for phosphorus and forms of nitrogen that, as plant nutrients, can cause excessive growth of algae and/or other aquatic plants.

The USEPA has published new nutrient criteria recommendations, intended to prevent over-enrichment of surface waters and to protect human and animal health. In January 2001, USEPA recommended that each State develop a nutrient criteria development plan to outline the process, including a mutually agreed upon schedule, by which the states intend to adopt nutrient criteria reflecting USEPA's recommnedations into its water quality standards. By the end of 2004, USEPA will evaluate states' progress against their respective plans. USEPA intends to propose to promulgate nutrient water quality criteria, relying substantially on the Clean Water Act Section 304 (a) criteria, when a state has not made substantial progress toward adopting such criteria, if USEPA determines that it is necessary to do so.

Currently, the USEPA is working with the SWRCB and RWQCBs on nutrient criteria development plans for California. The SWRCB is coordinating this effort. Staff of this Regional Board are working with SWRCB staff on this task.

Estimated Resources:

Staff time:	1 PY
Contract $:	none
Duration:	1 years